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# Vernal Pools

## Natural History and Conservation

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## *Chapter 1*

# *Introducing Vernal Pools*

Most people who have spent much time in the woods are aware of the small ponds that appear in low areas in early spring and often disappear by mid to late summer. These small, fishless water bodies are known popularly as vernal pools. They are homes for remarkable animals including the aptly named fairy shrimp — so-called both because of their tendency to appear in certain pools unpredictably from one year to the next and because, like spring ephemeral wildflowers, they complete their life cycle early and quickly, and are gone well before summer begins. Vernal pools are best known for their role in the lives of woodland amphibians, including wood frogs and mole salamanders (especially spotted, blue-spotted, Jefferson's, marbled, and small-mouthed salamanders), and a variety of invertebrates, including clam shrimp and fairy shrimp (Plate 1). All of these animals depend on vernal pools as breeding sites.

There is something almost magical about visiting a flooded woodland hollow in early spring and seeing hundreds of salmon-colored fairy shrimps swimming lazily above the submerged leaves, watching caddisflies in their miniature log-cabin houses lumbering along the bottom, and catching sight of a spotted salamander as it journeys to the surface for a gulp of air during its brief sojourn in the pool. Hearing the short-lived concert provided by quacking wood frogs is a pleasure eagerly anticipated during long late-winter days when it seems as though spring will never come. Each year, the burgeoning of life in tiny pools across the landscape carries a message of renewal and hope. It is an annual miracle, a uniquely miniature aquatic world, distinct from the surrounding woodlands, yet, as we shall see, dependent upon them.

In some cases, the pool whose crystal-clear water seethed with activity in early spring is an apparently stagnant mudhole when visited in midsummer. Look more closely — the basin is teeming with salamander larvae, snails, paddle-legged water bugs of various kinds and colors, an infinite variety of water beetles, worms, midge larvae, recently transformed wood frogs and spring peepers, and toad tadpoles with tiny legs and rapidly disappearing tails. In other instances, all that remains of the spring pool is a low area covered by ferns or stained leaves. If you have the right search image, you can find empty caddis cases and perhaps a few

